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EXAMINER

GOMA, TAWFIK A

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

This action is in response to the RCE filed on 5/09/2009.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 7, 12, 20 and 27-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto (US 6172955) in view of Nakane et al (US 6463021).

Regarding claim 1, Hashimoto discloses a recording method for recording data in a recording area of an information recording medium (fig. 6), comprising: interrupting a formatting process and recording data (col. 7 lines 11-18). Hashimoto fails to disclose determining whether to perform a defect detection process on at least a portion of the recording area in which the data are recorded based on a predetermined determination criterion pertaining to recording attribute information of the data. In the same field of endeavor, Nakane discloses determining whether to perform a defect detection process on at least a portion of the recording area in which the data are recorded based on a predetermined determination criterion pertaining to recording attribute information of the data (1, 7, fig. 10 and col. 6 lines 57-65). It would have been obvious to one of ordinary skill in the art to modify the method disclosed by Hashimoto by providing the defect detection process of Nakane. The rationale is as follows: One of ordinary skill in the art at the time of the applicant's invention would have been

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motivated to provide a defect detection process including criteria for when to perform the process in order to minimize interruption of the recording operation for performing defect detection (see Nakane abstract).

Regarding claim 2, Nakane further discloses wherein the recording area includes an area on which the defect detection process is already performed at least once (col. 9 lines 64-67 through col. 10 lines 1-15). The defect detection process is performed for each sector in the recording area.

Regarding claim 7, Nakane further disclose wherein the defect detection process corresponds to a verification process (col. 10 lines 5-15).

Regarding claim 12, Hashimoto discloses an information recording apparatus that is adapted to record information on an information recording medium (fig. 1), said apparatus comprising: formatting means for performing a formatting process on the information recording medium (9, fig. 1 and col. 6 lines 63-67 though col. 7 lines 1-3), recording means for recording data on the information recording medium in after interrupting the formatting process in response to a recording request from an external apparatus (Host and col. 7 lines 11-18). Hashimoto fails to disclose determination means for determining after the recording of the data whether to perform a defect detection process on at least a portion of the recording area in which the data are recorded based on recording attribute information of the data. In the same field of endeavor, Nakane discloses determination means for determining after the recording of the data whether to perform a defect detection process on at least a portion of the recording area in which the data are recorded based on recording attribute information of the data. (12, fig. 1

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and figs. 2 and 10). It would have been obvious to modify the apparatus of Hashimoto by providing the determination means of Nakane. The rationale follows as in claim 1 above.

Regarding claim 20, Nakane further discloses wherein the defect detection process corresponds to a verification process (col. 10 lines 5-15).

Regarding claims 27 and 29, Nakane further discloses wherein the defect detection process is performed on an acquired defect (col. 1 lines 26-32). The combination of providing the defect detection process of Nakane to the method of Hashimoto follows as in claims 1 and 12 above.

Regarding claims 28 and 30, Nakane further discloses wherein the defect detection process is performed on an inherent defect (col. 1 lines 28-31).). The combination of providing the defect detection process of Nakane to the method of Hashimoto follows as in claims 1 and 12 above.

Claim 22 is rejected under 35 U.S.C. 103 (a) as being unpatentable over Numata et al (US 6631106) in view of Hashimoto (US 6172955) and further in view of Nakane et al (US 6463021).

Regarding claim 22, Numata discloses a recording method for recording data in a recording area of an information recording medium (col. 2 lines 48-59), comprising: performing a formatting process on the information recording medium (fig. 12), performing a first verification process on at least a portion of the recording area during the formatting process (s2, s3, fig. 12) and performing a second verification process on said portion of the recording area (fig. 13 and col. 4 lines 22-25). Numata fails to disclose wherein the formatting process is interrupted for performing a recording operation. In the same field of endeavor, Hashimoto

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discloses interrupting a formatting process and recording data (col. 7 lines 11-18). It would have been obvious to one of ordinary skill in the art to modify the method disclosed by Numata by interrupting the formatting in order to perform recording as taught by Hashimoto. The rationale is as follows: One of ordinary skill in the art at the time of the applicant's invention would have been motivated to interrupt the formatting in order to perform a recording operation in order to allow the user to record and use a partially formatted disc without having to wait for a full formatting operation to be completed.

Further regarding claim 22, Numata fails to disclose wherein the second verification process is determined to be performed based on whether a predetermined determination criteria has been met. In the same field of endeavor, Nakane discloses determining whether to perform a defect detection process on at least a portion of the recording area in which the data are recorded based on a predetermined determination criterion pertaining to recording attribute information of the data (1, 7, fig. 10 and col. 6 lines 57-65), wherein the defect detection process is performed on an acquired defect (col. 1 lines 26-32). It would have been obvious to one of ordinary skill in the art to modify the method disclosed by Numata in view of Hashimoto by providing the defect detection process of Nakane. The rationale is as follows: One of ordinary skill in the art at the time of the applicant's invention would have been motivated to provide a defect detection process including criteria for when to perform the process in order to minimize interruption of the recording operation for performing defect detection (see Nakane abstract).

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Claims 23 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Numata et al (US 6631106) in view of Hashimoto (US 6172955) and further in view of Takasago (US 4730290) and further in view of Nakane et al (US 6463021).

Regarding claims 23 and 25, Numata discloses a recording method for recording data in a recording area of an information recording medium (col. 2 lines 48-59), comprising: performing a formatting process on the information recording medium (fig. 12), recording data in at least a portion of the recording area (fig. 4). Numata fails to disclose wherein the formatting process is interrupted for performing a recording operation. In the same field of endeavor, Hashimoto discloses interrupting a formatting process and recording data (col. 7 lines 11-18). It would have been obvious to one of ordinary skill in the art to modify the method disclosed by Numata by interrupting the formatting in order to perform recording as taught by Hashimoto. The rationale is as follows: One of ordinary skill in the art at the time of the applicant's invention would have been motivated to interrupt the formatting in order to perform a recording operation in order to allow the user to record and use a partially formatted disc without having to wait for a full formatting operation to be completed.

Further regarding claims 23 and 25, Numata in view of Hashimoto fail to disclose determining whether to perform a verification process on the portion of the recording area based on a criteria, wherein the criteria is whether the size or unit size of the data is less than or equal to a threshold value. In the same field of endeavor, Takasago discloses performing a verification process if the size of the data is less than or equal to a threshold (col. 3 lines 27-60). The first verification process (col. 3 lines 27-36) is performed if the size is less than the value of T2. It would have been obvious to one of ordinary skill in the art to modify the method

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disclosed by Numata and Hashimoto by performing the verification process if the size is less than a threshold as taught by Takasago. The rationale is as follows: One of ordinary skill in the art at the time of the applicant's invention would have been motivated to check the size of the data in order to perform the correct verification process based on the size of the defective area (i.e. replacing only a sector and continuing to record data on the track, or replacing an entire track).

Further regarding claims 23 and 25, Numata in view of Hashimoto and Takasago fail to explicitly disclose a defect detection process being performed on an acquired defect. Numata discloses a defect detection process that occurs after the formatting of the disc, and providing a secondary defect list to log the defects that are detected after formatting (col. 13 lines 56-67 through col. 14 lines 1-19). In the same field of endeavor, Nakane discloses performing a defect detection for an acquired defect, and logging that defect in a secondary defect list (col. 1 lines 25-33). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the method disclosed by Numata in view of Hashimoto and Takasago by performing a defect detection process for an acquired defect as in Nakane. The rationale is as follows: One of ordinary skill in the art at the time of the applicant's invention would have been motivated to perform a defect detection process on an acquired defect in order to log the defects that occur to degradation of the disc from rewriting.

Claims 3 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto (US 6172955) in view of Nakane et al (US 6463021) as applied to claims 1, 2, 7, 12, and 20 above, and further in view of Takasago (US 4730290).

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Regarding claims 3 and 14, Hashimoto in view of Nakane fail to disclose wherein: the recording attribute information includes information on a data size of the data; and the determination criterion corresponds to a criterion of determining to perform the defect detection process when the data size of the data is less than or equal to a preset first threshold value. Takasago discloses performing a verification process if the size of the data is less than or equal to a threshold (T2, col. 3 lines 27-60). The first verification process (col. 3 lines 27-36) is performed if the size is less than the value of T2 (and greater than T1). It would have been obvious to one of ordinary skill in the art to base the determination criteria on the size of the data. The rationale is as follows: One of ordinary skill in the art at the time of the applicant's invention would have been motivated to check the size of the data in order to perform the correct verification process based on the size of the defective area (i.e. replacing only one sector and continuing to record data on the track, or replacing an entire track).

Claims 8 and 21 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Hashimoto (US 6172955) in view of Nakane et al (US 6463021) as applied to claims 1, 2, 7, 12 and 20 above and further in view of Wu (US 7080296).

Regarding claims 8 and 21, Hashimoto in view of Nakane fail to disclose wherein the information recording medium conforms to a Mt. Rainier standard. Wu discloses wherein the information conforms to a Mt. Rainier standard (col. 1 lines 42-45). It would have been obvious to one of ordinary skill in the art to modify the medium disclosed by Hashimoto in view of Nakane to have the information conform to a Mt. Rainier standard. The rationale is as follows: One of ordinary skill in the art at the time of the applicant's invention would have

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been motivated to provide a Mt. Rainier standard in order to allocate spare areas ahead of time in order to facilitate defect detection processing.

Response to Arguments

Applicant's arguments filed 5/4/2009 have been fully considered but they are not persuasive.

Regarding applicant's argument that Nakane fails to disclose "*determining whether to perform a defect detection process*," because Nakane always performs a defect detection, this argument is not persuasive. Nakane discloses determining which of the different criteria to use (Step 1, fig. 10) for determining whether to perform a defect detection process (step 7, fig. 10). Nakane discloses that by using the different criteria, defect detection may not have to be performed and recording does not have to be interrupted unless the data is of the type where a stricter criteria is necessary (such as audio and video data, see Nakane col. 7 lines 3-10).

Applicant's arguments re primarily based on the premise that Nakane is only determining whether to perform defect correction, and that Nakane always performs defect detection (page 3). The examiner maintains that this argument is not persuasive. The Nakane system discloses that the process of defect detection encompasses defect correction. That is, a defect which has been detected and identified as such is "detected" by logging the location of the defect and assigning a replacement area for that defect. These steps, of logging the location, and assigning a replacement area are what applicant is identifying as defect correction. It is true that the Nakane reference does not perform what applicant is identifying as the defect correction steps based on the criteria. However, by not performing the correction steps, Nakane is not detecting a defect, since the correction of the defect is the same as the detection of the defect. When Nakane

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ignores an area which has some errors below the threshold, Nakane is determining not to perform the detection of the defect, which involve the correction steps of logging the location and a replacement area, based on the criteria he has set as the threshold level. Applicant argues that by merely checking the areas which have some errors against the criteria, Nakane is already performing defect detection. This argument is not persuasive because it is contrary to the entire purpose of the Nakane system. Defect detection in Nakane involves the logging of the location of the defect, and assigning a replacement area. Nakane recognizes that the detection of defects may be time consuming and unnecessary in certain situations. So, by checking the data against the criteria, Nakane can decide whether to perform the detection process or not. Therefore, Nakane clearly discloses that for some data where the less strict criteria is used, defect detection does not occur and recording is not interrupted to process the defect detection steps (i.e. identifying the location and assigning spare areas for the defective area).

Applicant's arguments seem to be directed to the differences between the criteria used by Nakane (which is a threshold level of errors) versus the criteria which are used by applicant (i.e. vicinity of defects to a defective area, and the size of the data). Applicant is reminded that although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Claims 1, 12 and 22 claimed criteria which has to be used by the system in determining whether to perform a defect detection does not preclude the use of a threshold level of errors as Nakane discloses.

With respect to applicant's arguments pertaining to claim 23, these arguments are also found to be unpersuasive. Applicant argues that Takasago does not disclose whether to perform

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a verification process based on the size of the data or the size of the corresponding recording unit. Applicant dismisses the Takasago reference by arguing that Takasago “merely describes the processing that occurs after the defection of an error based on the duration of the error.”

However, "the processing" which applicant is referring to is the verification process of Takasago which takes place. Takasago determines that when a duration of time (size of data) is greater than T1 but less than T2, the verification process or read-after-write operation that takes place is to re-record the data which is in the off-track sector in an alternate sector on the same track.

Furthermore, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). In the instant case, Takasago teaches the use of size of data in the form of duration as a criteria for the verification processes disclosed in the combination of references.

Applicant's arguments with respect to the use of the Nakane reference and the remaining dependent claims are not persuasive for the same reasons as applied above.

Conclusion

This is an RCE of applicant's earlier Application No. 10/758048. All claims are drawn to the same invention claimed in the earlier application and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the earlier application. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action in

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this case. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no, however, event will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TAWFIK GOMA whose telephone number is (571)272-4206. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on (571) 272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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